

Appl. No. 10/045,948
Amdt. dated February 14, 2005
Reply to Office action of October 14, 2004

Amendments to the Specification:

Please replace the paragraph bridging pages 6 and 7, beginning at page 6, line 18, and ending at page 7 line 2 with the following:

The forgoing examples are also illustrative of a separate embodiment of the present invention, whereby the aerogels are treated with surface preparation agents, such as water, to provide better adhesion of the monolayer forming precursors. Such treatment may either be carried out in advance, for example by hydroetching the aerogel in the manner described in co-pending US Patent Application Ser. No.10/045,930, and entitled “HYDROETCHING OF HIGH SURFACE AREA CERAMICS USING MOIST SUPERCRITICAL FLUIDS”, filed October 26, 2001, now US Patent No. 6,812,259 the entire contents of which are incorporated herein by this reference, or such treatment may take place concurrently with the application of the monolayer forming precursors. For example, and not meant to be limiting, when depositing certain monolayer coatings on a silica aerogel, it is advantageous to generate hydroxyl groups on the surface of the silica to provide sites for the monolayer forming precursors to bond to the silica. This may be accomplished by adding water to the supercritical solution, along with the monolayer forming precursors, or by hydroetching the aerogel with water to generate hydroxyl groups prior to the introduction of the monolayer forming precursors.